

REMARKS

Claims 1-18 and 20-70 are pending in the instant application. Claims 1-18, 20-59, and 66-70 are under examination. In the Office Action mailed October 3, 2008 (hereinafter "Office Action"), claims 1-18, 20-59, and 66-70 were rejected. In this Amendment, claims 1, 30 and 66 are amended for purposes of clarity. Withdrawn claims 60-65 are cancelled without prejudice, as drawn to a non-elected invention. Applicant reserves the right to prosecute the subject matter of the cancelled claims in related applications. Upon entry of the Amendment, claims 1-18, 20-59, and 66-70 will be pending.

Claims 1, 30 and 66 are amended to add the phrase "on a computer" in each step of the method prior to the outputting step. The outputting step has been amended to recite outputting "to a user" as one alternative. Support for the amendments is found, for example, in Section 5.5, at pages 57-59 of the specification.

No new matter has been added by the amendments. Entry of the foregoing amendments and consideration of the following remarks are respectfully requested.

THE REJECTION UNDER 35 U.S.C. § 101 SHOULD BE WITHDRAWN

In the instant Office Action, the Examiner rejected claims 1-18, 20-59, and 66-70 under 35 U.S.C. § 101, alleging that the claimed invention is directed to non-statutory subject matter. Applicant respectfully traverses the rejection.

The Examiner states that since claims 1-18, 20-57, 66, 67, and 70 of the claimed invention are directed to a method, the rationale suggested in the U.S. Patent and Trademark Office's guidance to examiners under the Memorandum "Clarification of 'process' under 35 U.S.C. § 101" (hereafter "the Memorandum") should be followed. The Examiner quotes paragraph three of the Memorandum, stating that:

a § 101 process must (1) be tied to another statutory class (such as a particular apparatus) or (2) transform underlying subject matter (such as an article or materials) to a different state or thing. If neither of these requirements is met by the claim, the method is not a patent eligible process under § 101 and should be rejected as being directed to nonstatutory subject matter.

See Office Action, page 4, second and third paragraphs.

With regard to the computer system and computer program product claims 58, 59, 68, and 69, the Examiner contends that the claimed systems and program products do not produce a useful, concrete and tangible result. *See* Office Action, page 6, third paragraph.

The Examiner also contends that the instant claims 1-18, 20-57, 59, 66, 67, 69, and 70 are drawn to a computer readable storage medium which could include at least one embodiment that reads on carrier waves or a signal. *See* Office Action, page 6, fourth paragraph. The Examiner suggests that the rejection over claims 1-18, 20-57, 59, 66, 67, 69, and 70 may be overcome by “strictly stating that the invention is not to read on ‘carrier waves’ and the instant claims must be clear that the invention could never be confused with an embodiment that covers carrier waves or a signal.” *See* Office Action, page 9, fourth paragraph.

Applicant respectfully disagree with the Examiner’s rejection. In *In re Bilski*, 545 F.3d 943 (Fed. Cir. 2008) (*en banc*), the Court of Appeals for the Federal Circuit reiterated the standard for patentability under 35 U.S.C. § 101, which was set forth in *Gottschalk v. Benson*, 409 U.S. 63 (1972), as a machine-or-transformation test:

[t]he machine-or-transformation test is a two-branched inquiry; an applicant may show that a process claim satisfies § 101 either by showing that his claim is tied to a particular machine, or by showing that his claim transforms an article.

See In re Bilski, 545 F.3d 943, 961, citing *Gottschalk v. Benson*, 409 U.S. 63, 70. In accordance with the holding of *In re Bilski*, Applicant has amended independent claims 1, 30 and 66 to specify that each step in the method takes place **on a computer** (emphasis added). These steps are thus tied to a machine, in a significant, non-trivial manner. The involvement of the machine is clearly not mere insignificant extra-solution data gathering. Thus, amended claims 1, 30 and 66 satisfy the machine branch of the machine-or-transformation test of *In re Bilski*. Moreover, amended claims 1, 30 and 66 transform data that are signals representative of physical objects or substances (cellular constituents such as mRNA or proteins), to produce a real world, practical result. Thus, claims 1, 30 and 66 also satisfy the transformation branch of the machine-or-transformation test. Therefore, claims 1, 30 and 66 are patentable under 35 U.S.C. § 101. Claims 2-18, 20-29, 31-57, 67, and 70 each ultimately depends from claims 1, 30 or 66, and thus are patentable under 35 U.S.C. § 101 for the same reasons.

Regarding claims 58, 59, 68, and 69, Applicant points out that these claims also satisfy § 101. Claims 58, 59, 68, and 69 are drawn to computer systems and computer program products, and thus satisfy the machine branch of the machine-or-transformation test of *In re Bilski*. Furthermore, the computer system and computer program product claims refer to method claims that also satisfy § 101, for the reasons discussed above. Claims 58, 59, 68, and 69 also satisfy the transformation branch of the machine-or-transformation test by

virtue of carrying out the claimed methods that transform signals representative of physical objects or substances (cellular constituents such as mRNA or proteins), to produce a real world, practical result. Therefore, claims 58, 59, 68, and 69 satisfy the machine-or-transformation test of *In re Bilski*. Thus, Applicant submits that claims 58, 59, 68, and 69 are patentable under 35 U.S.C. § 101.

Further, Applicant respectfully submits that the step of outputting to a computer readable storage medium also satisfies 35 U.S.C. § 101, since a computer readable storage medium would be construed consistent with the usage of the term in the instant specification. Applicant respectfully points out that, the specification does not contemplate a carrier wave or a signal as a computer readable storage medium. The specification clearly contemplates only tangible, physical objects as computer readable storage media. For example, the specification at page 58, line 33 to page 59, line 1 refers to tangible, physical objects such as “hard disk 4904, ... one or more floppy disks, one or more CD-ROMs, one or more DVDs or one or more DATs” as computer readable storage media. *See also* the specification at page 58, lines 9-10 and 16-18, and page 59, lines 24-25. As such, it is clear from the specification that a carrier wave or a signal is not considered to be a computer readable storage medium. Thus, Applicant submits that claims 1-18, 20-57, 59, 66, 67, 69, and 70 are directed to statutory subject matter under § 101.

Accordingly, Applicant respectfully requests that the rejection of claims 1-18, 20-59, and 66-70 under 35 U.S.C. § 101 be withdrawn.

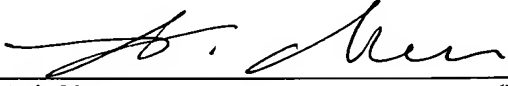
CONCLUSION

Applicant respectfully requests entry of the foregoing amendments and remarks into the file of the above-identified application. Applicant believes that all the pending claims are in condition for allowance. Withdrawal of the Examiner's rejections and allowance of the application are respectfully requested.

Respectfully submitted,

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